

transgelin-2 (D-8): sc-515586

BACKGROUND

Transgelin (also designated SM22 α), is expressed abundantly in smooth muscle cells. Transgelin-2 (also known as SM22 α homolog) is a homolog of transgelin and is also expressed in smooth muscle cells and by peritoneal B-1 cells. The human transgelin-2 gene (designated TAGLN2), which is located on chromosome 1q23.2, encodes a 199 amino acid protein that contains a calponin-like repeat and a calponin-homology (CH) domain. Transgelin-2 may function very similarly to transgelin. During embryogenesis, transgelin is expressed in smooth, cardiac and skeletal muscle, but is restricted during late fetal development and adulthood to all vascular and visceral smooth muscle cells and low levels of expression in heart. Transgelin is downregulated in several transformed cell lines, indicating that a reduction of transgelin expression may be an early indicator of the onset of transformation. Transgelin also binds actin, causing actin fibers to gel within minutes of binding. Binding of transgelin to actin occurs at a ratio of 1:6 actin monomers.

REFERENCES

- Shapland, C., et al. 1993. Purification and properties of transgelin: a transformation and shape change sensitive Actin-gelling protein. *J. Cell Biol.* 121: 1065-1073.
- Kobayashi, R., et al. 1994. Purification, characterization and partial sequence analysis of a new 25 kDa Actin-binding protein from bovine aorta: an SM22 homolog. *Biochem. Biophys. Res. Commun.* 198: 1275-1280.
- Li, L., et al. 1997. Evidence for serum response factor-mediated regulatory networks governing SM22a transcription in smooth, skeletal and cardiac muscle cells. *Dev. Biol.* 187: 311-321.
- Lawson, D., et al. 1997. Fibroblast transgelin and smooth muscle SM22a are the same protein, the expression of which is downregulated in many cell lines. *Cell Motil. Cytoskeleton* 38: 250-257.
- Camoretti-Mercado, B., et al. 1998. Expression and cytogenetic localization of the human SM22 gene (TAGLN). *Genomics* 49: 452-457.

CHROMOSOMAL LOCATION

Genetic locus: TAGLN2 (human) mapping to 1q23.2; Tagln2 (mouse) mapping to 1 H3.

SOURCE

transgelin-2 (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 44-59 within an internal region of transgelin-2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515586 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

transgelin-2 (D-8) is recommended for detection of transgelin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for transgelin-2 siRNA (h): sc-106633, transgelin-2 siRNA (m): sc-77363, transgelin-2 shRNA Plasmid (h): sc-106633-SH, transgelin-2 shRNA Plasmid (m): sc-77363-SH, transgelin-2 shRNA (h) Lentiviral Particles: sc-106633-V and transgelin-2 shRNA (m) Lentiviral Particles: sc-77363-V.

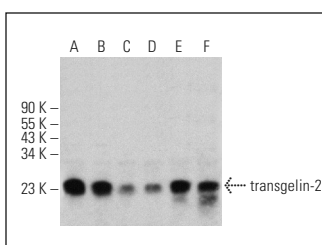
Molecular Weight of transgelin-2: 22 kDa.

Positive Controls: HISM cell lysate: sc-2229, WI-38 whole cell lysate: sc-364260 or C32 whole cell lysate: sc-2205.

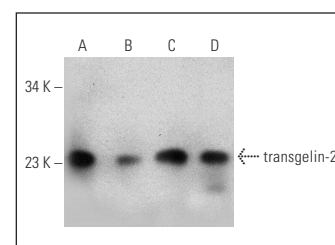
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



transgelin-2 (D-8): sc-515586. Western blot analysis of transgelin-2 expression in K-562 (A), HeLa (B), BC₃H1 (C), NIH/3T3 (D), A-10 (E) and RBL-1 (F) whole cell lysates.



transgelin-2 (D-8): sc-515586. Western blot analysis of transgelin-2 expression in WI-38 (A), HISM (B), C32 (C) and HEL 92.1.7 (D) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.